

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110980 A1

(51) International Patent Classification⁷: **C07C 217/46,**
A61K 31/132

(21) International Application Number:
PCT/IL2004/000536

(22) International Filing Date: **17 June 2004 (17.06.2004)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
60/479,185 18 June 2003 (18.06.2003) US
60/505,638 25 September 2003 (25.09.2003) US
60/537,553 21 January 2004 (21.01.2004) US
60/545,505 19 February 2004 (19.02.2004) US

(71) Applicants (for all designated States except US): **BIO-
LAB LTD.** [IL/IL]; P.O.Box 34038, 91340 Jerusalem (IL).

**YISSUM RESEARCH DEVELOPMENT COMPANY
OF THE HEBREW UNIVERSITY OF JERUSALEM**
[IL/IL]; Hi Tech Park, Edmond Safra Campus, Givat Ram,
91390 Jerusalem (IL).

(72) Inventors; and

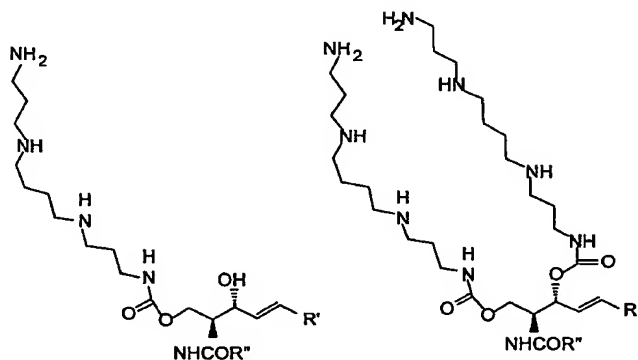
(75) Inventors/Applicants (for US only): **BARENHOLZ,**
Yechezkel [IL/IL]; 18 Nave Shaanan Street, 93707
Jerusalem (IL). **SIMBERG, Dmitri** [IL/IL]; Hantke
Street 50/9, 96629 Jerusalem (IL). **ROCHLIN, Elimelech**
[IL/IL]; Habanai 26/11, 96264 Jerusalem (IL).

(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.Box
4060, 61040 Tel Aviv (IL).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

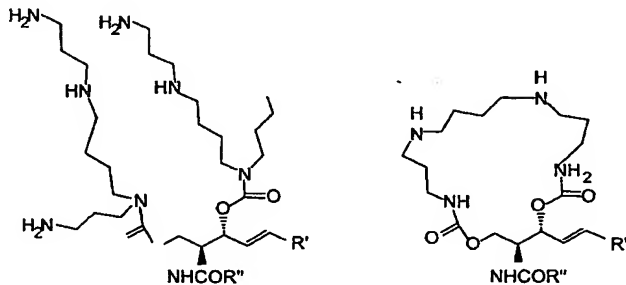
[Continued on next page]

(54) Title: **SPHINGOLIPIDS' POLYALKYLAMINES CONJUGATES**



A

B



C

D

(57) Abstract: The present invention concerns novel sphingolipid-polyalkylamines conjugates, a process for their preparation and pharmaceutical compositions comprising the same. In particular, the present invention concerns ceramide based polyalkylamine conjugates and its use as a capturing agent. A preferred ceramide polyalkylamine conjugate is a ceramide-spermine conjugate, more preferably, N palmitoyl D-erythro sphingosyl 1 carbamoyl spermine.

WO 2004/110980 A1



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.